



## **DAIRY DIRECTIVE PROJECT**



### **Semi Annual Progress Report**

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## **ACRONYMS**

DDP	Dairy Directive Project
GMP	Good Manufacturing Point
GOE	Government of Egypt
HACCP	Hazard Analysis and Critical Control Point
HEA	Health Educator Agent
MOH	Ministry of Health
SWOT	Strengths, Weaknesses, Opportunities and Threats
TOT	Training of Trainers

## Table of Contents

<b>I.</b>	<b>SEMI ANNUAL PROJECT HIGHLIGHTS .....</b>	<b>3</b>
<b>II.</b>	<b>INTRODUCTION.....</b>	<b>5</b>
<b>III.</b>	<b>PROJECT COMPONENTS .....</b>	<b>5</b>
	A. TRAINING ACTIVITIES.....	5
	1. Approach.....	5
	2. Methodology .....	6
	3. Targets .....	6
	4. Achievements .....	7
	a. DDP Training Courses for the First Group of HEAs.....	7
	1. Leadership for Sustainability.....	7
	2. Home Manufacturing of Hygienic Milk Products .....	7
	b. DDP Training Courses for the Second Group of HEAs .....	7
	1. Hygienic Production and Milk Handling .....	8
	2. Home Manufacturing of Hygienic Milk Products .....	8
	c. Village Meetings .....	8
	d. Video Showings .....	10
	B. PUBLIC AWARENESS CAMPAIGN .....	10
	1. Approach.....	10
	2. Methodology .....	11
	3. Targets .....	12
	4. Achievements .....	12
	TV.....	12
<b>IV.</b>	<b>TECHNICAL ASSISTANCE SERVICES.....</b>	<b>12</b>
	A. DAIRY PROCESSORS AND MILK BOTTLING PLANTS.....	12
	B. DAIRY DIRECTIVE RETREAT .....	13
<b>V.</b>	<b>MONITORING AND EVALUATION.....</b>	<b>14</b>
	A. SMALLHOLDERS' BASELINE SURVEY.....	14
	B. DDP IMPACT STUDIES.....	15
	C. REDUCED GAP BETWEEN LOOSE AND PACKAGED MILK.....	15
<b>VI.</b>	<b>PLANNED ACTIVITIES FOR THE NEXT PERIOD (JUNE – NOVEMBER 2003).....</b>	<b>17</b>
	<b>ANNEXES</b>	
	ANNEX 1 DDP SUCCESS STORY: "COUNTY OF CREAM".....	18
	ANNEX 2 DDP SUCCESS STORY: "WORLD OF MILK" .....	19

ANNEX 3	IMPACT STUDY ON DDP'S TV SPOTS.....	22
ANNEX 4	“WORLD OF MILK” VIDEO IMPACT STUDY.....	30

## I. SEMI ANNUAL PROJECT HIGHLIGHTS

The Dairy Directive Project (DDP) continues to make significant contributions to the goal of increasing the availability of safe, hygienic processed dairy products in Egypt. Highlights of these activities during the period November 2002 to May 2003 include:

- **48** additional new target villages (100% of target) were selected in the six target DDP Upper Egypt governorates. To date, DDP is working in **113** villages in the project area.
- A new group of **114** Health Educator Agents (HEAs) (100% of target) was nominated by the Ministry of Health (MOH) and joined DDP activities in the six targeted governorates, working in different districts than the previous group. Total HEAs working with DDP reached **243**; they are covering **29** districts in the six governorates.
- Due to increased demand in the project area, retail prices of milk and dairy products increased by **25%**.
- **Two** additional dairy plants (in addition to the previous five) out of the twelve plants DDP works with adopted hygiene and sanitation techniques that comply with HACCP requirements. One of Egypt's major processing plants, *Greenland*, received HACCP certification, along with *Katilo* previously certified, brings the total number of plants certified to date to **two**.
- **Four** women smallholders in DDP's target group started small hygienic cheese-making enterprises in three different governorates, to generate income.
- **22** training activities (100% of target) were provided for the two groups of MOH HEAs throughout DDP's six target Upper Egypt governorates. **Ten** of these training programs were conducted for the second group of HEAs.
- **487** village meetings (234% of target) were conducted for **13,819** mothers and pregnant women (237% of target). DDP Cairo project staff provided follow-up for the women participants of 158 of these meetings. To date, **933** village meetings have been conducted for **23,697** participants.
- **444** showings of DDP's *World of Milk* video were presented to **20,222** children at nurseries, kindergartens, and primary schools. **29,946** children have been exposed to **766** showings of this video to date. Success stories on the effects of this video on children can be found in Annex 2.
- **Four** promotional TV spots (100% of target) were produced and broadcast on all eight Egyptian television local channels (200% of the target.) The in-kind value of **3,136** minutes of free air time donated to DDP to date equals

**\$4,066,017** (almost **200%** of DDP's cost share requirement); **\$1,227,172** of this was accrued during this past semi-annual period.

- An ongoing DDP public awareness campaign continued to encourage daily and weekly newspapers to produce and print articles on the importance of milk for the target groups. To date, **44** articles have been produced and published in major newspapers – **10** during this reporting period (125% of the target)– at no charge to DDP. Fewer articles appeared during this period, due to the extensive media coverage of the Iraqi war.
- **2,000** copies of an illustrated brochure promoting hygienic milking practices for smallholders, entitled *Tales of Aunti Salma and Her Daughter Elham on Hygienic Milking*, were produced and disseminated by DDP (100% of the target.) The brochures were distributed during training courses and village meetings, as well as at health centers and doctors' offices. This brochure also served as the direct inspiration for a play presented by Health Educators in Fayoum governorate (see Annex 1.)
- **2,000** copies of a brochure promoting the milk consumption, entitled *Milk: Food, Remedy, and Disease Prevention*, were re-printed and disseminated by DDP. The brochures were distributed during training courses and village meetings, as well as at health centers and doctors' offices.
- Two studies measuring the impact of DDP's media campaign were conducted:
  - ✓ One on the effects of DDP's TV spots on milk consumption and behavioral change in consuming milk and dairy products in targeted and non-targeted governorates. This study indicated that 32% of a sample of urban children ages 11 – 13 started drinking milk after seeing these spots (see Annex 3.)
  - ✓ A second study on the effects of the *World of Milk* video on children and their consumption of milk, in two targeted governorates. This study revealed that 28% of the sample started drinking milk after viewing the video (see Annex 4.)

## II. Introduction

The Dairy Directive Project (DDP) aims to contribute to improving health and decreasing the rate of malnutrition and miscarriage. By increasing the availability of safe, hygienically processed dairy products throughout Egypt, this would eventually result in decreased infant/child mortality. To achieve this, DDP involves Ministry of Health (MOH) Health Educator Agents (HEAs), smallholder farmers, doctors, mass media, and the private sector in six target governorates in Upper Egypt—Giza, Fayoum, Bani Suif, Minya, Sohag and Assiut. DDP is creating a base of trained and motivated MOH extension agents.

Through the HEAs, DDP targets pregnant women, nursing mothers and mothers of young children in a nationwide public awareness campaign. The campaign promotes the benefits of dairy nutrition. It utilizes the mass media to disseminate this message to half the Egyptian population through television, radio, video, and print media. DDP also provides technical assistance to commercial dairy processors to improve, modernize and enhance the production capabilities of the Egyptian dairy industry for the domestic and export markets. Dairy processing volunteers and Egyptian specialists are provided for targeted technology transfer. U.S. study tours are conducted to expose Egyptian dairy processors to modern processing equipment and marketing techniques. This provides them the opportunity to adopt and/or purchase improved technologies, equipment and practices.

## III. PROJECT COMPONENTS

### A. Training Activities

#### 1. *Approach*

One main objective of the Dairy Directive Project's (DDP's) training program is the creation of a strongly motivated and trained core group of Ministry of Health (MOH) Health Educator Agents (HEAs.) After the project ends, they will have gained the capacity to continue teaching smallholder livestock farmers how to produce and handle clean, hygienic milk and dairy products and to promote the importance of dairy products in nutrition.

DDP uses a ***staggered training approach*** to disseminate educational messages to MOH Health Educators. Training content is divided into various two-day modules that are provided to Health Educators over a two to three-month period. This approach enables trainees to gradually absorb reasonable amounts of information, then disseminate it to target groups. Each training module adds information that is built on the previous one. Considerable time is allocated during each training program for receiving the feedback of trainees on how target groups responded to previous messages. Evaluations indicate that Health Educators appreciate the timing and content of this approach and find the training gives them an effective way to approach smallholders.

Due to the successful results of the staggered training approach, DDP will continue the training offered to the first group of **129** Health Educators. It will also expand the information dissemination in the target areas using the same methodology to the new group of **114** Health Educators selected under the second year plan. The number of training courses are doubled and cover both the first and second groups of HEAs.

Another important objective is to target women in a nationwide public awareness campaign on the benefits of dairy nutrition for children, pregnant women and nursing mothers. By the end of the project, DDP is also committed to expose 50% of the entire Egyptian population (about 30 million men, women and children), to DDP's messages. DDP's media campaign impact studies indicate that the public's awareness of DDP's messages has been increased to about 90% in both rural and urban areas.

## **2. Methodology**

### **a. Tool Box Technique**

Training programs incorporate technical information along with extension communication techniques. Effective delivery of messages to target groups requires strong communication methods. Thus, DDP focuses on providing HEAs with a *tool box* consisting of various communication tools. For example, the *tool box* includes: (1) a poster showing the importance of milk for children; (2) the *World of Milk* video; and (3) a coloring book that encourages children to consume milk and dairy products. All these tools address the same subject. The reasoning for this is to build on the complementarity of these tools. This toolbox allows HEAs to be flexible as educators and to be able to communicate with rural smallholders in a variety of situations.

### **b. Training-of-Trainers**

DDP, in cooperation with the Ministry of Health, implements Training-of-Trainers (TOT) activities to provide MOH staff – doctors, HEAs and Food Safety Extension Agents, as well as private doctors who own or work in clinics – with detailed information on hygienic and safe milk production, handling and consumption. As DDP's key *information disseminators*, HEAs represent the prime institutional source of health and nutrition information for the rural population. Their role is vital to DDP's success and impacts on all its activities.

DDP arranges TOT activities for HEAs focusing on:

- Dairy hygiene practices that prevent milk-borne diseases
- Adoption of non-traditional methods and practices for milking and production of dairy products, and
- Importance of dairy products in neo-natal, infant and child nutrition.

Training activities focus on reaching smallholders in the target rural areas in DDP's six target governorates. DDP also conducts follow-up visits to:

- (i) ensure that the trained MOH extension staff members have delivered the planned messages to their target smallholder communities, and
- (ii) measure the adoption rate of improved practices.

## **3. Targets**

By the end of the project, the proposed target is for 2,000 livestock smallholder families to adopt improved livestock handling practices after attending village meetings, through one-on-one home visits and after exposure to the various DDP public awareness activities, such as radio and TV spots, posters, and brochures. DDP has been increasingly proactive in ensuring that these crucial messages are communicated to as many of the target vulnerable groups as it has the capacity to reach, mobilizing all the project's and staff's resources to identify innovative ways of disseminating the message as widely as possible. To date DDP

has reached over 13,000 smallholders through direct communication, through village meetings and through one-on-one visits. By the end of the project, DDP expects to reach an additional 7,000 smallholders, for a total of 20,000. A minimum of 4,000 smallholders, or 200% of the original target, are expected to adopt DDP's proper milking procedures.

DDP selects and trains HEAs from eight targeted villages annually in each of the six target governorates. Nineteen HEAs are selected from each governorate, according to specified criteria, for a total of 114 HEAs each year. Each HEA is to deliver messages and technical information to an average of 35 smallholders. HEAs disseminate the messages using a variety of communication tools through village meetings, direct contacts with smallholder families and during home visits. This is in addition to regular family visits to the health clinic units in the selected villages.

#### 4. Achievements

##### a. DDP Training Courses for the First Group of HEAs

###### 1. Leadership for Sustainability

This training course includes core information on leadership theories, characteristics of effective leaders, reasons for working with leaders, types of leaders, and how to identify leaders and establish close working relations with them. The course has been conducted five times during this reporting period as follows:

**Table 1: Health Educator Agents (HEAs) Leadership Training Activities**

Governorate	Course Duration	Date	# of Trainees
Giza	One day	January 14, 2003	23
Bani Suif	One day	January 30, 2003	15
Fayoum	One day	March 6, 2003	19
Assiut	One day	February 27, 2003	24
Sohag	One day	March 13, 2003	20
<b>Total Number of Trainees</b>			<b>101</b>

###### 2. Home Manufacturing of Hygienic Milk Products

The first day of this course covers the theoretical and practical aspects of manufacturing hygienic *karish* cheese (Egyptian cottage cheese.) Egyptians usually make this type of cheese at home from raw milk which can transfer many diseases if proper milk handling practices are not used. The second day focuses on the principles of effective training including core information on the role of trainers before, during and after training. This course has been presented three times during this reporting period as follows:

**Table 2: HEA Dairy Processing Training Activities**

Governorate	Course Duration	Date	# of Trainees
Giza	Two days	April 8 and 10, 2003	22
Bani Suif	Two days	April 2-3, 2003	16
Sohag	Two days	May 7-8, 2003	20
<b>Total Number of Trainees</b>			<b>58</b>

##### b. DDP Training Courses for the Second Group of HEAs



## 1. Hygienic Production and Milk Handling

The first day of this course covers proper milking procedures and leadership. The second day includes diseases transferred through milk, nutritional and health benefits of milk and heat treatment of milk. This course has been conducted seven times as follows:

**Table 3: Hygienic Production and Milk Handling Training Activities**

Governorate	Course Duration	Date	# of Trainees	Remarks
Giza	Two days	January 15-16, 2003	19	Training has been conducted for Groups I and II
	Two days	March 23-24, 2003	19	
Bani Suif	Two days	January 29-30, 2003	19	
Fayoum	Two days	March 5-6, 2003	22	
Minya	Two days	February 19-20, 2003	23	
Assiut	Two days	February 26-27, 2003	20	
Sohag	Two days	March 12-13, 2003	21	
<b>Total Number of Trainees</b>			<b>143</b>	

## 2. Home Manufacturing of Hygienic Milk Products

The course content is the same as that for the first group. This course has been presented four times as follows:

**Table 4: Dairy Processing Training Activities**

Governorate	Course Duration	Date	# of Trainees
Giza	Two days	April 19-20, 2003	19
Bani Suif	Two days	April 2-3, 2003	19
Fayoum	Two days	Course will be given in June 2003	
Minya	Two days	April 20-21, 2003	21
Assiut	Two days	Course will be given in June 2003	
Sohag	Two days	May 7-8, 2003	19
<b>Total Number of Trainees</b>			<b>78</b>

## c. Village Meetings

In the past six months, the two groups of trained HEAs conducted the following number of village meetings:

**Table 5: Village Meetings Conducted**

Governorate	Number of Meetings	Number of Participants *	Number of Follow-up Meetings by DDP Cairo Staff
Giza	73	3,194	27
Fayoum	83	1,934	26
Bani Suif	71	1,733	23
Minya	64	1,867	25
Assiut	87	2,615	25
Sohag	109	2,476	32
<b>Total</b>	<b>487</b>	<b>13,819</b>	<b>158</b>

\* The average number of women farmer/smallholder participants per meeting is 28.

Following each training course, Health Educators meet with women smallholders, either at clinic centers or at their homes (one-on-one visits), to disseminate the information they learned in the course and to follow-up on previous recommendations. During the past six months, DDP introduced a new idea in the rural communities—home cheese-making of tasty flavored cheeses, such as strawberry, apricot and coffee-- which generated much interest among both women smallholders and Health Educators. Based on this information, four smallholders were motivated to start small projects of hygienic cheese-making to generate income. Three smallholders in Minya asked for further details on preparation of their business venue, concerning sanitation, ventilation, tiling, and optimum location for the business in their houses, and the required tools and equipment needed to develop a larger operation. Two weeks after the cheese-making course in Fayoum, Minya and Assiut, four women smallholders started separate hygiene cheese-making enterprises.



**Figure 1 Health Educator from Fayoum showing women smallholders how to prepare home-made cheese hygienically.**

#### d. Video Showings

In addition to the regular village meetings, the HEAs held showings of DDP's video, *World of Milk*, at **444** kindergartens and elementary schools. These showings involved **20,222** children. Children, teachers and kindergarten principals reacted very enthusiastically to the video. At the end of each show, children started clapping and singing the theme song of the video "Milk is God's Gift." For more examples of the children's response, see *The World of Milk* success story in Annex 2.



Figure 2: Children watching DDP's "World of Milk."

Table 6: Video Shows Presented

Governorate	Number of Shows	Number of Children *	Number of Shows Attended by Cairo DDP Staff
Giza	87	3,870	41
Fayoum	94	4,418	29
Bani Suif	62	2,852	23
Minya	37	1,561	16
Assiut	85	3,868	27
Sohag	79	3,653	18
<b>Total</b>	<b>444</b>	<b>20,222</b>	<b>153</b>

\*The average number of children per show is 45.

### B. Public Awareness Campaign

#### 1. Approach

Through its ongoing media campaign--via television, radio, video and print media--DDP provides information to the public on the benefits of consuming processed (safe) dairy products compared to "fresh" unprocessed products. This awareness campaign aims to provide a healthy alternative to counteract the increased exposure of children and family members to advertisements for low nutritive value foods and "junk foods" through television commercials and other media.

## 2. Methodology

The media is one of the strongest means to communicate and effect dramatic changes in human behavior. The recognized strength of mass media tools is based on a brief, simple message, and its easy absorption by target audiences. Mass media can reach the recipients where they live and work. The language of the message can make an indelible impact when it addresses the specific characteristics of the target audience. Thus, DDP bases its campaign on various types of media to achieve three goals:

- First – Increase awareness to *trigger consumer interest*.
  - Second - Lead the consumer to *assess and then to try* the advertised product, and
  - Final phase – Convince the consumer to *adopt the product*.
- The DDP *Public Awareness component* relies on TV and radio broadcasts, newspaper and magazine articles in combination with printed material such as posters and brochures. These are all designed specifically for smallholder target groups, produced by DDP and distributed through HEAs, doctors and community leaders. All the TV and radio broadcast time is contributed free (**amounting to 3,136 minutes to date with a value of \$4,066,017**; during this semi annual period, the value amounted to \$1,227,172. Strong support and follow-up is also consistently provided by senior MOH Cairo officials.

**Posters:** DDP uses its posters—which consist of an attractive cartoon picture and a brief message about the importance of milk, both easily comprehensible to rural smallholder farmers--as a communication tool. Posters are distributed and displayed in village health centers and clinics, district hospitals and during village meetings. Posters are considered to be one of the most effective communication tools in raising people's awareness on a specific subject, as a single image and motto are easily fixed in people's memories.

**Brochures:** After raising consumer awareness through the mass media, more detailed information on the campaign message is needed. Most people need to be convinced by substantial information before deciding to change long-held habits and practices. This information can be obtained through a variety of educational information tools, one of which is a simple brochure that contains basic technical information needed to convince the reader to adopt a new practice. Such brochures create increased interest and desire to test the new practice -- in DDP's case, increasing consumption of dairy products by vulnerable groups.

**Radio and TV:** Another means used by DDP to maximize its access to target beneficiaries is to inform HEAs, during their TOT activities, of the timings of scheduled public awareness broadcasts and spot advertisements. As a result of being aware of this information, HEAs are able to promote these events, vastly increasing listenership and maximizing the benefit of the broadcasts. HEAs can also ensure that the messages are being heeded and adopted by providing follow-up on scheduled broadcasts and spots, discussing and promoting the concepts that were broadcast with rural women in village meetings, health centers and home visits.

### 3. **Targets**

DDP targets 50% of the Egyptian public (approximately 30 million men, women and children) through its public awareness campaign, and is committed to ensuring that the DDP message reaches the targeted groups in a systematic and sustained manner.

### 4. **Achievements**

#### **TV**

DDP produced and arranged for the airing of five new TV broadcast spots aimed at different target groups, such as pregnant women, nursing mothers, children and youth. These spots emphasized the importance of hygienic and safely prepared milk for health. Total time broadcast (through May 8<sup>th</sup>) was 3,136 minutes on the eight Egyptian TV channels (according to the Government of Egypt (GOE) Monitoring and Planning Division's report to MOH and DDP.)

DDP staff actively lobbied the Upper Egypt local TV channels (Channels 7 and 8) in addition to the two main *national* TV channels (Channels 1 and 2), to encourage and persuade the producers of women's special interest programs to include dairy hygiene messages in their programs. ***According to the GOE's report, the estimated TV audience to date is 22 million.***

According to a DDP-sponsored impact study conducted by Professor Dr. Mohamed Fatehy El Shazely of Alexandria University, 96% of a sample of 643 elementary school students were exposed to DDP's TV spots, 93% remembered these spots well enough to quote from them, and 87% found them very attractive. For a detailed description of this study, see Annex 3.

***Table 7: Impact of Commercials on Awareness and Nutritional Patterns of Elementary School Students in Minya and Alexandria***

Governorate	Impact			
	Increased Awareness for Body Health ( % )	Drank Milk for the First Time ( % )	Increased Rate of Drinking Milk ( % )	Increased Rate of Consuming Milk Products ( % )
Minya	94.50	27.30	63.60	78.80
Alexandria	58.01	14.40	41.90	20.00
Average	76.26	20.85	52.75	49.4

## **IV. Technical Assistance Services**

### **A. Dairy Processors and Milk Bottling Plants**

To ensure that milk, once obtained from the producers is hygienically progressed, DDP provides technical assistance on Hazard Analysis and Critical Control Point (HACCP)

concepts to 20 medium and large-size Egyptian processors. HACCP is a management system in which food safety is addressed through the analysis and control of biological,

chemical, and physical hazards from raw material production, procurement and handling, to manufacturing, distribution and consumption of the finished product. For successful implementation of a HACCP plan, management must be strongly committed to the HACCP concept. A firm commitment to HACCP by top management provides company employees with a sense of the importance of producing safe dairy products.

During December 2002, and January 2003, Dr. Ata Barudi, a U.S. volunteer expert on food safety, conducted his second assignment with DDP. This assignment was a follow-up to the eight plants he previously visited in May 2002. All eight plants are applying the three most important recommendations (out of seven.) All the recommendations related to hygiene and product safety, which affect the quality assurance of dairy products.

In May, DDP provided another U.S. volunteer expert, Dr. Delbert McDaniel, who assisted ten dairy processors and milk bottling plants. The main recommendations focused on Good Manufacturing Points (GMPs) of cheese-making and related hygienic aspects.

### **B. Dairy Directive Retreat**

DDP conducted its semi annual retreat from May 14-17, 2003. The purpose of the retreat was to:

- evaluate the project's activities to date, and
- develop an awareness of the different points of view about these activities from various levels of Ministry of Health staff.

The retreat hosted 23 participants representing all categories of Ministry of Health (MOH) staff who work directly with DDP: Health Educators, Food Safety Managers, Managers of Preventative Medicine, Managers and senior Ministry officials from Cairo headquarters and all the project governorates.

During the retreat, all past and projected DDP activities were assessed using SWOT analysis. This analysis confirmed that DDP had successfully accomplished 100% of its planned activities.

A special emphasis of the retreat was the subject of DDP's sustainability, including the different options, tools to make it happen, responsibilities, and mechanisms. A wide range of suggestions was proposed by MOH personnel to enhance DDP's sustainability which included the following:

- Institutionalize DDP by making it one of the Health Education department's components according to a plan that includes the project's agenda, impact assessment and follow-up.
- Implement DDP's training activities through the MOH training department in the governorates and allocate an adequate budget to enlarge the training to include all MOH departments.
- Include DDP's activities in all MOH projects concerned with mothers' health.

- Continue and increase seminars and training programs for village women who already learned basic milk handling procedures and want to start a small dairy processing operation.
- Facilitate loans for women who want to establish dairy projects through Women's Club Associations and cooperation with other national and funding authorities.
- Continue to increase awareness of the consumption and handling of safe milk and dairy products.

## V. MONITORING AND EVALUATION

### A. Smallholders' Baseline Survey

In the last semi-annual report, DDP included the results of the adoption of the proper milking procedures message for smallholders. This message was targeted at 3,200 families who had attended one or more village meetings.

During January 2003, DDP HEAs conducted another baseline survey in the newly selected villages to determine current smallholders' milking practices. This survey included baseline details for the ten recommendations DDP delivers to smallholders. The baseline survey covered 1,570 randomly selected women smallholders (260 per governorate.) These smallholders will be surveyed again after receiving DDP's messages and HEA training to measure the rate and extent of change. The ten procedures included in the survey are described in the following table:

**Table 8: Baseline Milking Procedures Survey for the Newly Selected Villages**

Number of Milking Procedures Adopted	Number of Women Smallholders	%
1. Washing and drying the udder prior to milking.	897	57.1
2. Cleaning and drying the milk container prior to milking.	614	39.1
3. Checking the first few drops of milk and not adding them to the rest of the milk.	187	11.9
4. Avoiding over-stretching the animal's teat during milking.	106	6.8
5. Using a clean light net to strain the raw milk while pouring it from the milking container to the boiling container.	37	2.4
6. Boiling milk for those who used to use it raw.	1,368	88.2
7. Boiling milk properly (from 7- 10 minutes) and then immersing it in cold water.	893	56.8
8. Giving milk regularly to the children of the household.	791	50.4
9. Introducing milk to pregnant and nursing women as part of their diet.	1,006	64
10. Manufacturing dairy products from heat-treated milk.	89	5.6

The study indicated that very few smallholders use hygienic milking procedures and those that use improved practices are not as effective as they could be. These women, who are the animals' caretakers, are invited to attend DDP village meetings and are also

being contacted through home visits (one-on-one.) A continuous follow-up activity is currently taking place to ensure that smallholders will adopt the DDP recommendations.

### ***B. DDP Impact Studies***

The Dairy Directive Project is committed to expanding the public's awareness of milk and milk products to reach 30 million Egyptians in the targeted and non-targeted governorates through the various project tools. A media campaign was decided upon to be the tool to disseminate the information to the Egyptian population. In Egypt, TV is the most effective means to get the best results. During April and May, DDP conducted two studies to measure the impact of its media campaign, especially the TV spots and the *World of Milk* video. The two studies took place in four of its six targeted governorates.

Starting in February 2003, the kick off of its TV spot airing program, DDP staff lobbied the TV producers to encourage them to give maximum exposure to its spots. There was an impressive response from the TV chiefs and managers at the national headquarters. Immediate instructions were issued by the TV Chief to all Egyptian TV channels to air DDP spots frequently and at different times of the day to expose as many people as possible to these spots. To date, 3,136 minutes of spots have been aired. The TV spots study covered the 12 DDP-produced spots in two governorates (Minya, and a non-targeted governorate—Alexandria (see Annex 3.)

Starting in July 2002, DDP gave each Group 1 HEA at least one copy of the *World of Milk* video, to show in kindergartens, nurseries and primary schools (first and second grade.) After eight months of showing this video, DDP wanted to measure the effect of showing the video to the children in the different governorates. Two governorates were selected for the study (Fayoum and Assiut.)

***Table 9: Distribution of Children According to Change Occurring One Week After Viewing the Video***

<b>Observed Change</b>	<b>Frequency</b>	<b>%</b>
Started drinking milk for the first time	28	12
Drinking significantly more milk	72	44.5
Started consuming dairy products for the first time	12	0.8
Consuming significantly more dairy products	88	42.5
Started eating dairy products while drinking the same amount of milk		0.2
<b>Total</b>	<b>200</b>	<b>100</b>

For the detailed study, see Annex 4.

### ***C. Reduced Gap between Loose and Packaged Milk***

According to the Health Educators in the six governorates, and verified by DDP Cairo staff, retail prices of loose milk have increased by an average of 25%, while packaged milk prices have remained the same. Loose milk prices now range between L.E. 2.45 to 2.55 (\$0.40 – \$0.42)/liter, compared to the former cost of LE 2.00 (\$0.33)/liter. This is evidence of the increase in demand for milk and the increase in milk consumption, to which DDP's activities



have contributed. It also points up that packaged milk is still not in high popular demand, which is consistent with local tradition and preference.

## VI. Planned Activities for the Next Period (June – November 2003)

### A. Training Activities

During the next semi annual period, DDP will present the following courses for HEAs (Groups 1 and 2):

Course	Duration	Governorate	Month	Remarks
Home Manufacturing of Hygienic Milk Products	Two days	Fayoum Assiut	June 2003 June 2003	Course will be conducted twice
Child Nutrition	Two days	All six governorates	July, August, September 2003	Course will be conducted 12 times
Nutrition for Pregnant and Lactating Women	Two days	Bani Suif Minya	October 2003	
Training of Trainers (TOT)	Three days	Minya	July or August	Participants will be from all six governorates

### B. Media Activities

#### 1. Printed Materials

- Re-print 2,000 copies of the illustrated brochure *Proper Milking Practices, Stories of Aunti Salma and her Daughter Ilham*, for women smallholders.
- Produce one new poster (1,000 copies) on proper milking procedures.

#### 2. TV Coverage

- Produce and broadcast two new TV spots addressed to children promoting the benefits of drinking milk.

#### 3. Video Production

- Produce 400 copies of the *World of Milk* video in CD format for use by the HEAs (Groups 1 and 2)

#### 4. Newspaper Coverage

- Produce and publish a minimum of 10 articles in daily and weekly papers.

## **ANNEX 1 DDP SUCCESS STORY: “County of Cream”**

Among the many business calls received by the Dairy Directive Project (DDP) was a very special telephone call from two Ministry of Health (MOH) Health Educators who work in Fayoum governorate. Both Hewida Ramadan, Health Educator in Kasr Rashowan village, and Amal Adly, Health Educators' district supervisor, surprised Cairo DDP staff members when they invited them to attend an original play, "County of Cream." The play was inspired by a DDP brochure promoting hygienic milking practices.

DDP Cairo staff were full of questions: what is the purpose of the play, who wrote the scenario, how can you get a director, what about actors and actresses, where you will present the play? Amal explained that the main objective of the play is to illustrate proper milking procedures to rural women through an innovative method of communication. Her voice started to get fainter----and then the line was cut.

They called back in five minutes, explaining that their calling card had expired. Continuing our conversation, they said "Do not worry" as the answer to all our questions. Amal wrote the scenario, and she convinced her husband, Marwan, a secondary school teacher responsible for theater activities, to direct the play. He selected some of his theater students to perform. Hewida, who is also a good amateur actress, will participate and hopefully reveal some of her hidden talents.

Naturally we asked if there was an appropriate theater and stage to present the play. Again the answer was "Do not worry." Marwan had already received approval to use the stage of the Ministry of Culture in Fayoum free of charge because the manger of theater activities there is a close friend. We also wanted to know why Hewida and Amal did not coordinate with us first to be sure that DDP would be able to finance the play. Again we were told not to worry. Everyone involved in the play had volunteered his or her time. This is just an example of the satisfaction that motivates Health Educators to spread DDP's message using nontraditional methods of communication and persuasion.

We assured Hewida and Amal that we knew that they are very enthusiastic about DDP. But we still wondered why they did this. Hewida and Amal explained frankly that they became jealous of a Health Educator in Assiut governorate who had developed a very interesting acted dialogue, used in village meetings, between two rural women, that illustrate proper milking procedures. We were curious if they considered this dialogue their main reason for creating the play. They felt that DDP's booklet of "Stories of Aunt Salma and her daughter Ilham" was the main stimulus for their efforts. They explained that this booklet presented a very appealing dialogue in colloquial Arabic between a mother and her daughter. This technique is very attractive for rural smallholders as it is very similar to the scenarios of TV series. They also felt it was a very effective idea of DDP to make this booklet suitable for illiterate people as they can learn from the illustrations that show proper milking procedures.

We probed further, asking Hewida and Amal what was the relationship between this booklet and the play "County of Cream?" They explained that they felt the play is an innovative product because they did not believe – in the beginning of DDP - that they would be able to advise rural women on hygienic milking practices. "This kind of advice is considered a real breakthrough in smallholder extension work. This booklet helps us transfer that message very effectively. The booklet challenged us to develop an innovative communication idea,

“County of Cream.” On this note, Hewida and Amal ended the call, saying we would talk more on the day of the show.

The play was a major triumph for DDP. About 95 rural women attended, in addition to 10 Health Educators. Among the factors for its success was the outstanding performance of the actors and actresses which exceeded all expectations. As a result of presenting the play in Fayoum, some other departments of the Ministry of Health there asked Amal to prepare similar plays to transfer other messages through innovative methods. DDP decided to show the CD of the play at its recent semi-annual retreat in May. Hewida, Amal and Marwan were invited to participate in this retreat where they received much recognition and appreciation. And this experience is already stimulating Health Educators in other geographical areas to develop other creative methods of communication and persuasion.



**Figure 3: Talented Health Educator in a scene explaining proper milking procedures.**



**Figure 4: Secondary school students explaining the diseases caused by unboiled milk.**

## **ANNEX 2     DDP SUCCESS STORY: "World of Milk"**

As part of its country-wide public awareness campaign, ACDI/VOCA Egypt's Dairy Directive Project (DDP) produced an original videotape entitled "The World of Milk." A 14-minute production promoting the consumption of milk and dairy products for children, the video communicates educational themes through devices which have a great appeal for children, such as a "Barney"-like cow and catchy folkloric and original songs, and also features a famous Egyptian movie star as the hostess of the video. The video is presented in a lively format featuring a school trip for kindergarteners to a traditional farm, a modern farm and a milk processing plant.



**Figure 5: Health Educator showing DDP's poster along with the video.**

DDP has already shown the video to its Ministry of Health Health Educators, the core group whom it trains and uses to disseminate its messages. The Health Educators in turn have shown it in kindergartens throughout the six-governorate project area in Upper Egypt. These viewing sessions have generated a large number of success stories, the highlights of which are shared below.

**Fatma Hussien**, a Health Educator in Assiut, showed the film in a kindergarten and after the film finished, the kids were still singing the song that was featured in the film. When she went back to the same kindergarten weeks later, the kids asked her to replay the film. She asked them if they learned anything from the film. They all answered positively telling her that they had started to drink milk regularly.

**Hala Youssef**, a Health Educator in Fayoum, was asked by the teachers in the Community Development Kindergarten in Abgeig to write down the words to the songs as the kids loved them and wanted to learn them. She also noticed that, when the kids came out of the kindergarten after seeing the film, they were still singing the film's songs. To motivate them, she told them to drink milk regularly and as a reward, she would come back and show them

the film again. Also in Fayoum, at the El Shorouk Elementary School, the kids sing the "milk" song every day in the morning, after the national anthem.

**Nagwa Atrees**, a Health Educator in Sohag, wanted to show the video at a local kindergarten, but there was no VCR or TV available. She used her own TV and borrowed a VCR from the neighbors. When she played it for the children, it took two hours as the kids wanted to replay the song several times. The kids always ask her about the film whenever they see her. The son of the man who lent her the VCR asked to borrow the tape so he can see the film with his family.

**Fatma Amrou**, a Health Educator from Assiut, found that three children, two brothers and a sister, used to drink milk when their family owned a buffalo, but their father had sold it. As a result of watching the film, they insisted that their family buy milk for them daily. Other Health Educators report that many other families with animals used to sell all the milk. After their children saw the film and started to ask for milk daily, these families started to save some of the milk for their own children.

In Fayoum, Health Educator **Abeer Hussein** was told by an elementary school teacher that her daughter, after watching the film, wants to drink milk and eat *belila* (a dish made with wheat and milk) daily so she can be healthy and beautiful like the woman that was milking her cow in the film.

In Assiut, while she was walking in a street in her village, Health Educator **Sedika Bekhit** was approached by a child who had seen the film in his kindergarten who told her that he drinks milk but his mother does not. He asked her to visit her and persuade her to drink it because she is pregnant and her baby needs it, and she did.

Based on the widespread success of the video, DDP plans to donate it to Channel 7 (the Upper Egypt channel) so it can be aired on an ongoing basis.

### ANNEX 3 IMPACT STUDY ON DDP'S TV SPOTS

The objective of DDP's ongoing campaign that promotes milk and milk products is to reach half of the Egyptian population. It was important for the program to conduct a survey to ensure that its goal has been achieved. DDP decided to conduct this survey in two governorates: Minya, which is located in the program's target area, and Alexandria, which is located out of the program's target area. The choice of governorates was not limited to the project area. DDP's aim is to reach half the Egyptian population in **all** governorates.

In order to survey as broad a cross-section of its target population in the two governorates, DDP selected four categories of interviewees: elementary school students in rural areas, middle school students, households represented by mothers of elementary school students in rural areas and employees in urban areas. Elementary students were only interviewed in rural areas. The mothers' response was required as a crosscheck and it is difficult to contact specific mothers in an urban area. A total of 1,313 people representing four categories of interviewees were surveyed as indicated in the following tables:

Minya Governorate	Elementary School Students	Middle School Students		Households		Total
	Rural	Rural	Urban	Rural (Mothers of Elementary School Students)	Urban (Employees)	643
	165	101	137	140	100	

Alexandria Governorate	Elementary School Students	Middle School Students		Households		Total
	Rural	Rural	Urban	Rural (Mothers of Elementary School Students)	Urban (Employees)	670
	160	100	134	154	122	

The main objective of the survey was to verify if at least 50 % of the population was aware of DDP's awareness campaign. DDP was also interested to assess how much the commercials had influenced popular nutritional habits regarding consumption of milk and dairy products. Thus the survey questions covered a variety of topics: viewing DDP commercials, remembering DDP commercials, increasing awareness of the importance of milk and dairy products, and starting/increasing the consumption of milk and dairy products as a result of the awareness campaign. The findings are summarized below.

#### A. Impact of DDP Commercials on Elementary School Students

The percentage of elementary school students who viewed, memorized or found DDP commercials attractive is indicated in the following table:

Governorate	Viewed DDP Commercials ( % )	Accurately Recalled DDP Commercials ( % )	Liked DDP Commercials ( % )
	Rural Areas	Rural Areas	Rural Areas
Minya	97.60	97.60	97.60
Alexandria	94.40	90.00	76.90
Average	96.00	93.80	87.25

The above figures indicate that 96% of the sample in rural areas viewed DDP commercials which greatly exceed the campaign objective of 50%. To crosscheck this figure, interviewees were also asked about commercial(s) that they recalled. 93.80 recalled at least one DDP commercial. 87.25 % liked DDP commercials. This figure is very significant, as satisfaction is considered the first step in the persuasion process.

More interviewees in Minya, in all categories, saw the commercials than in Alexandria. This was probably because there are fewer viewing choices in Minya, compared to Alexandria where satellite TV is readily available. It can also be explained by the fact that in Minya, the impact of DDP commercials was reinforced by other DDP activities, such as village meetings and the dissemination of brochures and posters, in contrast to Alexandria which is a non-project governorate.

DDP was also eager to assess the impact of its commercials on increasing awareness of the beneficial effects of milk and dairy products on the human body. This awareness would be reflected in changes in nutritional patterns as a result of viewing its commercials. Results of data analysis are shown in the following table:

Governorate	Impact			
	Increased Awareness of Body Health ( % )	Drank Milk for the First Time ( % )	Increased Rate of Drinking Milk ( % )	Increased Rate of Consuming Milk Products ( % )
<b>Minya</b>	94.50	27.30	63.60	78.80
<b>Alexandria</b>	58.01	14.40	41.90	20.00
<b>Average</b>	<b>76.26</b>	<b>20.85</b>	<b>52.75</b>	<b>49.4</b>

As these figures indicate, the average percent of increasing awareness of the importance of milk and dairy products for body health was 76.26% which exceeds the main objective of DDP's campaign. DDP commercials also succeeded in encouraging an average of 20.85 % to drink milk for the first time. This figure shows the impressive impact of these commercials on children's nutritional habits. It indicates that parents, with their traditional advice to drink milk and eat dairy products, might not always be heeded in comparison to the use of non traditional methods, such as the commercials, that influence children positively and motivate them to change their nutritional habits. Children who used to drink milk and consume dairy products were also influenced by these commercials: 52.75% increased their rate of drinking milk and 49.4% increased their rate of consuming dairy products as a result of exposure to DDP commercials.

## **B. Impact of DDP Commercials on Middle School Students**

Survey results of 472 students from both rural and urban areas in both Minya and Alexandria governorates can be summarized as follows:



Governorate	Viewed DDP Commercials ( % )		Accurately Recalled DDP Commercials ( % )		Liked DDP Commercials ( % )	
	Rural	Urban	Rural	Urban	Rural	Urban
<b>Minya</b>	97.08	99.01	94.20	99.01	94.20	99.01
<b>Alexandria</b>	98.50	94.00	97.01	91.00	84.30	79.00
<b>Average</b>	<b>97.79</b>	<b>96.51</b>	<b>95.61</b>	<b>95.01</b>	<b>89.25</b>	<b>89.01</b>

As can be seen above, an average of 97.79 % of total interviewees viewed DDP commercials and 95.61 accurately recalled at least one of DDP commercials in **rural areas** in both Alexandria and Minya. Results also showed that 89.25 % liked DDP commercials. This group was thus highly likely to be persuaded by these commercials to change their consumption habits.

**In urban areas** 96.51% of interviewees on average viewed DDP commercials, while 95.01% could recall at least one. Results also showed that 89.01 % of total interviewees liked DDP commercials and thus were apt to be persuaded by them.

DDP also wanted to measure the impact of its commercials on increasing awareness of the importance of consuming milk and dairy products on the human body which would be reflected in changes in consumption patterns. Survey results from middle school children are shown in the following table:

Governorate	Impact							
	Increased Awareness of Body Health ( % )		Drank Milk for the First Time ( % )		Increased Rate of Drinking Milk ( % )		Increased Rate of Consuming Milk Products ( % )	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
<b>Minya</b>	91.97	72.30	24.80	32.70	62.04	45.50	82.50	44.60
<b>Alexandria</b>	63.40	62.00	14.90	14.00	24.60	15.00	27.60	18.00
<b>Average</b>	<b>77.69</b>	<b>67.15</b>	<b>19.85</b>	<b>23.35</b>	<b>43.32</b>	<b>30.25</b>	<b>55.05</b>	<b>31.30</b>

As the above figures indicate, the average percent of increased awareness of milk's importance for body health is 77.69 % in rural areas and 67.15 % in urban areas in both Minya and Alexandria governorates. These figures significantly exceed the main objective of DDP's campaign. DDP commercials were also successful in motivating an average of 19.85 % in rural areas and 23.35 % in urban areas to drink milk for the first time--in both Minya and Alexandria governorates.

The above results point up the great impact of these commercials on the nutritional habits of middle school children. This indicates that nutritional patterns can be changed by non traditional methods, even those of teenagers who are considered a difficult group to convince. Students who previously drank milk and consumed dairy products were also positively influenced by these commercials: 43.32% in rural areas and 30.25% in urban areas increased their rate of drinking milk in both Minya and Alexandria governorates. Similarly, the rate of dairy product consumption increased to 55.05% in rural areas and 31.30% in urban areas in both governorates.

## C. Impact of DDP Commercials on Households and Family Members

The aim of DDP's campaign is increasing awareness of the importance of milk and dairy products for half the Egyptian population. DDP also wanted to collect data that shows impact on as many categories of people as possible. Based on this, members of households in the area of the survey (mothers) were also asked to answer questions on the impact of the commercials on themselves and other family members.

### 1. Impact of DDP commercials on households

DDP wanted to collect data from households in rural areas--represented by mothers of elementary school students--in addition to households in urban areas whose members work in the ministries of health, agriculture, education, and social affairs. Survey results of the impact of DDP commercials on 516 households in rural and urban areas can be summarized as follows:

Governorate	# of Households		Viewed DDP Commercials ( % )		Accurately Recalled DDP Commercials ( % )	
	Rural	Urban	Rural	Urban	Rural	Urban
<b>Minya</b>	140	100	100.00	100.00	100.00	100.00
<b>Alexandria</b>		122	99.40	92.60	94.80	87.70
<b>Average</b>			<b>99.70</b>	<b>96.30</b>	<b>97.40</b>	<b>93.85</b>

The above results show that in **rural areas** in both Alexandria and Minya, an average of 99.70 % of the total interviewees watched DDP commercials and 97.40% recalled at least one. **In urban areas**, 96.30% on average viewed DDP commercials whereas 93.85 of them recalled at least one DDP commercial. These figures indicate that there is a huge audience for DDP commercials in both project and non-project areas.

DDP was also interested in measuring the level of impact on households. Figures on this impact are shown in the following table:

Governorate	Impact									
	Increased awareness For body health ( % )		Drank milk for the first time ( % )		Increased rate of drinking milk ( % )		Consumed milk products for the first time ( % )		Increased rate of consuming milk products ( % )	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
<b>Minya</b>	99.30	78.00	15.00	14.00	73.60	24.00	6.40	21.00	85.70	36.00
<b>Alexandria</b>	58.40	39.30	5.80	7.40	5.80	14.80	6.50	4.10	14.30	13.9

The above figures show that the influence of DDP commercials is greater in Minya compared to Alexandria, which might be attributed to the combined effect of other DDP communication methods and tools introduced to women in Minya such as village meetings, posters, and home visits.



## 2. Impact of DDP commercials on household family members

As women represent the main “caretakers” of nutritional status in the family, data gathered from mothers included the influence of DDP commercials on mothers in addition to other family members – husbands, boys, girls, grandmothers and grandfathers who live with the family. Survey results of the impact of DDP commercials on 516 households' family members in rural and urban areas are summarized below:

### a. Impact on Husbands

Women interviewees' comments on the impact of DDP commercials on their husbands are summarized in the following table:

Governorate	Impact on Husbands									
	Increased awareness of the effect of milk on body health ( % )		Drank milk for the first time ( % )		Increased rate of drinking milk ( % )		Consumed milk products for the first time ( % )		Increased rate of consuming milk products ( % )	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Minya	98.60	33.00	12.10	8.00	75.00	16.00	5.00	22.00	89.30	31.00
Alexandria	37.70	12.30	1.90	4.90	11.03	13.10	3.20	4.90	16.90	12.30

These figures show that the impact of the commercials is greater in Minya. The incidence of increased awareness in Alexandria and especially in the urban areas is low which can be attributed to the accessibility to other viewing alternatives, including satellite channels, and also other leisure activities in addition to viewing TV.

### b. Impact on Children

Women interviewees' comments on the impact of DDP commercials on their daughters and sons can be summarized in the following two tables:

Governorate	Impact on Children									
	Increased awareness of the effect of milk on body health ( % )		Drank milk for the first time ( % )		Increased rate of drinking milk ( % )		Consumed milk products for the first time ( % )		Increased rate of consuming milk products ( % )	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Minya	79.30	24.00	10.00	21.00	66.40	40.00	10.70	19.00	74.30	31.00
Alexandria	42.20	17.20	12.30	10.70	18.8	17.20	5.20	4.90	17.50	9.80

Governorate	Impact on Children									
	Increased awareness of the effect of milk on body health ( % )		Drank milk for the first time ( % )		Increased rate of drinking milk ( % )		Consumed milk products for the first time ( % )		Increased rate of consuming milk products ( % )	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
<b>Minya</b>	73.60	30.00	12.10	26.00	64.30	40.00	2.10	21.00	71.40	32.00
<b>Alexandria</b>	36.40	17.2	8.40	8.20	16.90	13.90	6.50	3.30	18.20	10.70

Figures of impact among girls and boys show that percent of raising awareness in rural areas in Minya is over 70% whereas it is over 35% in Alexandria which reflects the great influence of DDP commercials in rural areas. By contrast, in urban areas percentages of increased awareness ranges for boys and girls in the two governorates between 17 % and 30 %, this reflects the importance of satellite channels in urban areas. The same explanation applies regarding change in nutritional patterns between Minya and Alexandria and between urban and rural areas in each governorate.

### c. Impact on Grandparents

As grandfathers and grandmothers still live in the same household as the rest of the family, especially in rural areas, this category was among those surveyed to measure the impact of DDP commercials. Women interviewees' comments on the impact of DDP commercials on grandfathers and grandmothers are summarized in the following table:

Governorate	Impact on Grandparents									
	Increased awareness of the effect of milk on body health ( % )		Drank milk for first time ( % )		Increased rate of drinking milk ( % )		Consumed milk products for the first time ( % )		Increased rate of consuming milk products ( % )	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
<b>Minya</b>	10.00	18.00	zero	13.00	4.30	9.00	0.70	15.00	7.10	24.00
<b>Alexandria</b>	16.10	1.20	0.60	zero	3.90	zero	0.60	0.80	3.90	0.80

According to the figures, this group experienced the least impact. This result is normal as it is often difficult to change nutritional habits as one gets older.

## STUDY SUMMARY

The results of this survey indicated that, in all aspects of the assessment of the effectiveness of DDP commercials, the project was successful in achieving or exceeding designated targets. Awareness of the benefits of milk and dairy products was increased in all groups surveyed. For example, the percentages for increased awareness of the importance of milk were 94.50% and 58.01% for elementary school children in Minya and Alexandria respectively. The percentage of average increase in the memorization of DDP commercials reached 93% among elementary school students in Minya and Alexandria. Behavior

modification was also impressive. For example, the average percentage of elementary school children who started drinking milk for the first time as a result of viewing DDP commercials was 20.85% in both Minya and Alexandria.

In general, DDP commercials attracted viewers' attention and increased their awareness of the benefits of milk and dairy products. The commercials also created positive behavior modification by changing nutritional patterns for individuals who consumed milk and dairy products for the first time, in addition to reinforcing consumption for individuals who used to consume milk and dairy products at a lower rate prior to exposure to the DDP awareness campaign.

## ANNEX 4 “WORLD OF MILK” VIDEO IMPACT STUDY

One of Dairy Directive Project’s (DDP) main objectives is promoting the consumption of milk and dairy products especially among children. This prompted DDP to produce the “World of Milk” video in July 2002. The purpose of this video is to encourage children to like milk and dairy products and thus to increase their consumption. The video features a well-known Egyptian actress (known for children’s TV programs) and milk messages set to lively original music and targeted at children nationwide. The story of the video is a kindergarten class visit to a farm and a milk factory. During their trip, the children see cows and buffaloes and become aware that these animals are the source of milk. During their visit to a modern dairy plant, they see and understand through simple explanations how cheese, cream and other dairy products are processed.

To date, HEAs have shown this video 766 times to 29,946 children in nurseries, kindergartens, and elementary schools in the past 10 months.

DDP wanted to assess the video’s effect on children. In April 2003, DDP had Professor Dr. Abdel Hamid Ibrahim of the Agricultural Research Center, Media Extension, Ministry of Agriculture and Land Reclamation conduct an impact study of children in two DDP governorates, Fayoum and Assiut. This study included pre-school children ages 4, 5 and 6 (45% boys and 55% girls) from urban and rural areas.

The study measured children's reaction to the video one week after they had viewed it. The children’s response was obtained through drawings, and questions, for example if they currently drink milk, what are the different dairy products, and their preference for milk compared to other drinks. They were also asked about their preference for dairy products and *junk* foods. To verify and validate the children’s answers, feedback was also provided by their mothers and kindergarten personnel.

The study indicated the following:

### 1. The benefits of milk as result of watching the video

#### Milk’s Benefits--Drawings

Response	Frequency	%
Maintaining healthy teeth	100	25
Strengthening and protecting bones	85	21.25
Acquiring energy, vitality and enhanced learning	95	23.75
Acquiring the ability to play actively and happily	120	30
<b>Total</b>	<b>400</b>	<b>100</b>

The children were shown pictures and drawings of teeth, legs, body health, children's activities, and running contests. Each had two versions, a healthy and a non-healthy choice. Children were asked to choose one.

30% of the sampled children chose “milk leads to acquisition of the ability to play actively and happily,” and 25% chose “milk maintains healthy good-looking teeth.”





## 2. Knowledge of dairy products acquired from watching the video

The children were then shown figures of a glass of milk, fruit, vegetables, yogurt, ice cream, and a piece of cheese. They were asked to circle milk-related products. 100% of the children correctly identified the dairy products.

The following table shows preference for milk and dairy products in comparison to soft drinks, tea, potato chips and snacks as a result of watching the video:

Preferred Items	Frequency	%
Milk	85	64
Milk preferred to other drinks	13	10
Potato chips	10	7.5
Soft drinks	12	9
Lollipops	6	4.5
Tea	5	4
Not preferring milk	2	1
<b>Total</b>	<b>133</b>	<b>100</b>

Children were allowed to make one or more choices. 64% preferred drinking milk. Nine percent of the sample preferred drinking juices and soft drinks. Only 1% did not like to drink milk.

## 3. Identifying negative effects of not drinking milk and consuming snacks according to their response in the drawings

Response	Frequency	%
Know	89	89
Doesn't know	11	11
<b>Total</b>	<b>100</b>	<b>100</b>

In order to measure how much children are aware of milk's benefits, drawings of a glass of milk, a lollipop, healthy teeth, and decayed teeth were shown to the children. 89% recognized that milk provides good and healthy teeth.

## 4. Ability to repeat words, phrases, and/or the situation after watching the video that reflect understanding the benefits of drinking milk

Response	Frequency	%
Yes	96	96
No	4	4
<b>Total</b>	<b>100</b>	<b>100</b>

To measure the extent to which children were paying attention while viewing the video and its contents concerning milk's benefits, children were asked if they remembered words and/or phrases from the video. Results show that 96% had the tendency to repeat both words/phrases that included milk's benefits.

## 5. Words or phrases memorized by children that reflected knowledge of milk's benefits

Benefits	Frequency	%
Maintaining healthy teeth and bones	85	31.25
Acquiring energy, vitality and learning	13	20.8
Strengthening body	10	20.8
Aiding growth	12	18.8
Feeding humans	6	8.8
<b>Total</b>	<b>192</b>	<b>100</b>

Children were allowed to mention more than one benefit. 31.25% memorized from the video that milk maintains healthy teeth and bones, and 20.8% mentioned that milk is the cause of acquiring energy, vitality and learning. 18.8% cited milk's benefit as an aid to growth.

## 6. Distribution of the children studied according to milk and dairy products' consumption before viewing the video

### a. Consumption of milk

Practice	Frequency	%
Drinking	75	75
Not drinking	25	25
<b>Total</b>	<b>100</b>	<b>100</b>

### b. Consumption of Dairy Products

Practice	Frequency	%
Consuming	88	88
Not consuming	12	12
<b>Total</b>	<b>100</b>	<b>100</b>

Before viewing the video, children were asked about their consumption of milk and dairy products. 25% said that they did not drink milk. Children's responses were verified by their mothers. 12% of the children did not consume dairy products. According to mothers' comments, there were no children who do not drink milk and eat dairy products after seeing the video.

## 7. Distribution of children according to change occurring from one week after viewing the video

Observed Change	Frequency	%
Started drinking milk for the first time	25	12
Drinking significantly more milk	72	44.5
Started consuming dairy products for the first time	12	0.8
Consuming significantly more dairy products	88	42.5
Started eating dairy products while drinking milk at the same rate		0.2
<b>Total</b>	<b>200</b>	<b>100</b>

One week after viewing the video, the same group of children was asked again about their consumption of milk and dairy products. 12% started to drink milk for the first time, and 44.5% of those who were already drinking had increased their rate of consumption. Regarding dairy products, 42% increased their rate of consumption, and 0.8% started to eat dairy products for the first time.

The mothers' evaluation of their children's nutritional behavior starting from one week after viewing the video:

Response	Frequency	%
Change	85	85
No change	15	15
<b>Total</b>	<b>100</b>	<b>100</b>

In order to verify the children's information, their mothers were asked about their change in milk/dairy products consumption. 85% had changed in their consumption of milk and dairy products starting from one week after viewing the video, and only 15% did not change their consumption significantly.

The mothers of seven children mentioned that there had not been a noticeable change in their children's consumption habits; their children are consuming milk within the acceptable average. However, their children now are aware of much more information about the benefits of milk and dairy products.

## STUDY SUMMARY

As the purpose of this video was to encourage children to drink milk and consume dairy products to improve their health, children have clearly received the message of the video. They not only received the message, but they also found the way in which it was presented attractive, and 85% of those who never drank milk before started to drink it. The rate of dairy product consumption has also significantly increased, by 42%. Children recognized the benefits of milk and dairy products, and how these benefits make them grow healthier and stronger.

Revised July 6, 2003—4:29 p.m.